Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

CW 41: Angle-Angle-Side Postulate

**Honors Geometry**

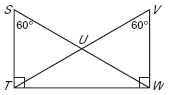
**TWO ANGLES AND THE SIDE NOT BETWEEN THEM (Angle Angle Side – AAS)**

AAS - with measures of 40o and 600 and side length of 5 inches that is **NOT** between the 2 angles.

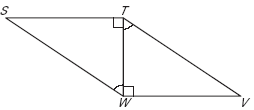
* Use your ruler to draw a line segment of length 5 inches.
* Label the endpoints A and B
* At point A, construct a 40o angle. Extend the ray for the angle as far as you can on the paper.
* We can NOT construct the 60o angle at point B because then the side (5 inches) would be between the angles. We need to construct a different angle at point B.

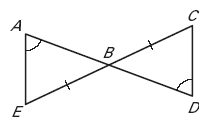
1. In a triangle, the sum of the angles of the triangle add up to \_\_\_\_\_\_\_\_\_
2. Since two angles are 40o and 600, the third angle must be \_\_\_\_\_\_\_\_\_\_
3. Therefore, we need to construct an angle that measures \_\_\_\_\_\_\_\_\_\_ at point B.

* Construct the angle from part c) at point B. Extend the ray for the angle as far as you can on the paper.
* Label the point where the two rays intersect “C”. (There should be a 600 at vertex C.)
* Compare your triangle to your neighbors. Are the triangles congruent?

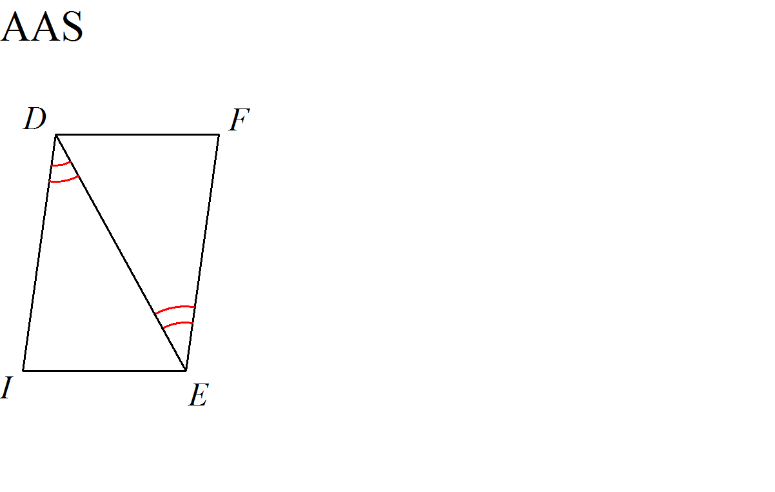


1. Can Δ*STW* and Δ*VWT* be proven congruent with the information given in the diagram? If so, state the postulate or theorem you would use.



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2. **GIVEN**: , ∠*A* ≅ ∠*D*

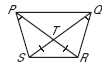
**PROVE**: Δ*ABE* ≅ Δ*DBC*

1. **Given:** 

**Prove :** ∆*IDE* ≅∆*FED*

**Directions:** Determine if the two triangles are congruent. If so write a congruency statement and identify what postulate is needed to prove congruency. You only can prove by **AAS, SSS, SAS, ASA.**

|  |  |
| --- | --- |
| 5. | 6. |
| 7. | 8. |
| 9. | 10. |

11. Given: Markings in the diagram

Prove: ∆*PTS* ≅**∆***QTR*

12. Given: .

Prove:

